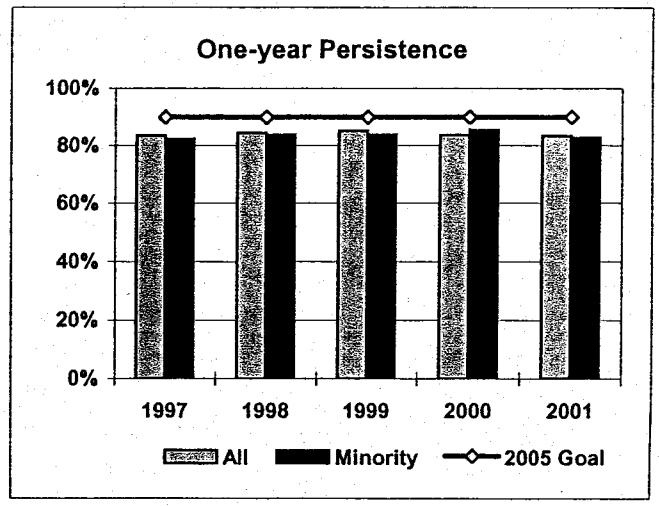
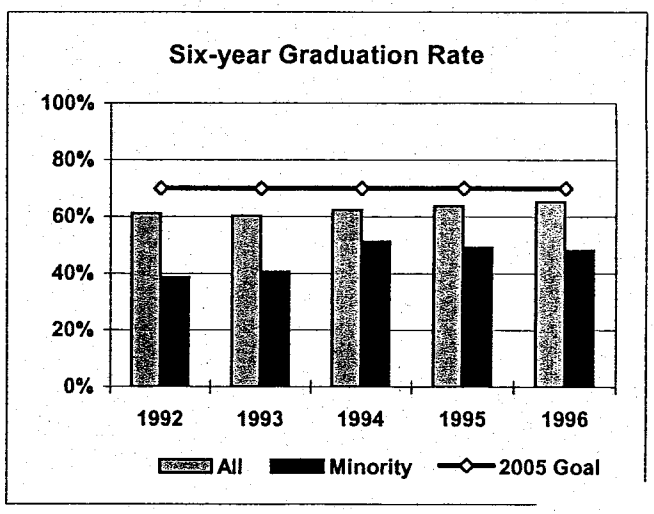
BOR #	MGT #	ISU#	Performance Indicator
3.1.2.3	42	1	One-year undergraduate persistence rate.

Entry year	1997	1998	1999	2000	2001
Native Am	54.5%	80.0%	75.0%	40.0%	83.3%
African Am	79.5%	82.7%	80.7%	85.6%	84.9%
Asian Am	89.9%	87.7%	89.5%	92.0%	82.9%
Hispanic	80.4%	81.1%	85.3%	82.5%	79.8%
White	83.9%	84.6%	85.2%	83.6%	83.7%
All	83.6%	84.4%	85.1%	83.7%	83.4%
Minority	82.4%	83.9%	83.9%	85.5%	82.9%
2005 Goal	90.0%	90.0%	90.0%	90.0%	90.0%



2 Six-year undergraduate graduation rate.

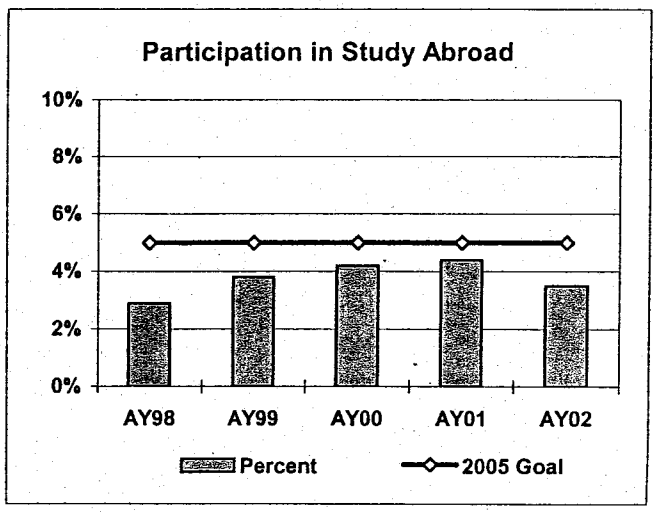
Entry year	1992	1993	1994	1995	1996
Native Am	40.0%	28.6%	71.4%	50.0%	42.9%
African Am	27.3%	33.5%	34.0%	43.5%	40.0%
Asian Am	56.4%	53.4%	72.0%	64.1%	61.0%
Hispanic	36.5%	55.4%	50.9%	35.6%	45.0%
White	62.7%	62.7%	63.1%	64.7%	66.5%
All	61.1%	60.4%	62.4%	63.7%	65.3%
Minority	38.6%	40.7%	51.3%	49.2%	48.2%
2005 Goal	70.0%	70.0%	70.0%	70.0%	70.0%



BOR #	MGT #	ISU#	Performance Indicator

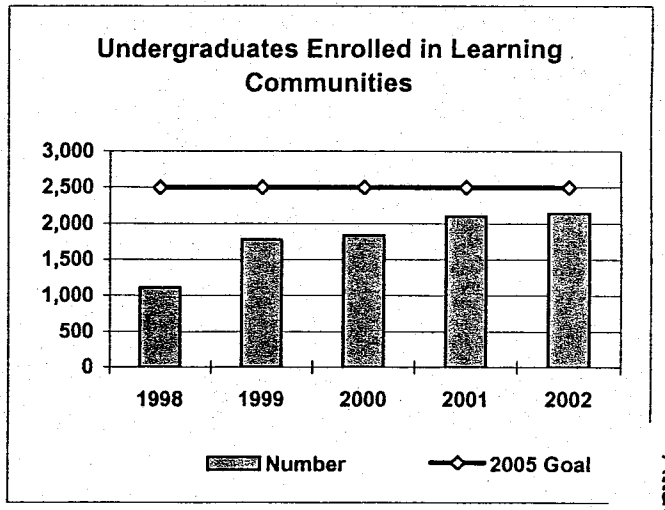
3 Percent of all undergraduate students who participated in a study abroad experience during the academic year.

	AY98	AY99	AY00	AY01	AY02
Number	602	802	898	962	797
Percent	2.9%	3.8%	4.2%	4.4%	3.5%
2005 Goal	5%	5%	5%	5%	5%



4 Number of undergraduate students enrolled in learning communities during the academic year.

	1998	1999	2000	2001	2002
Number	1,114	1,779	1,838	2,103	2,139
2005 Goal	2,500	2,500	2,500	2,500	2,500



5 Percent of student credit hours (SCH) earned by undergraduate students

Participation in Practicums and

G.D. 5b
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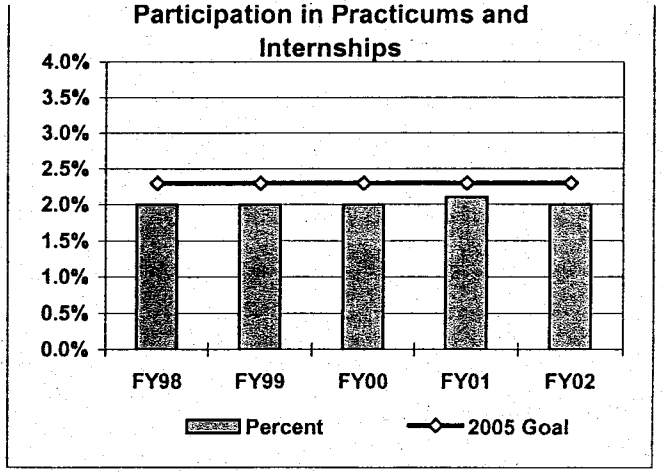
BOR #	MGT #	ISU#	Performance Indicator

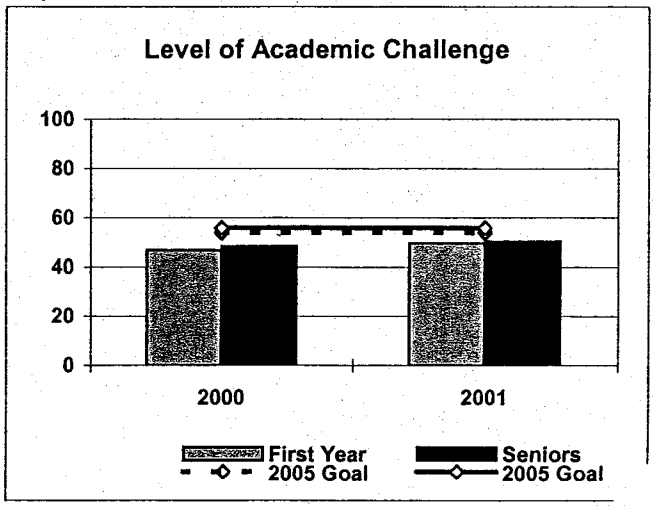
who participated in practicum/internships that earn academic credit.
(excludes Veterinary Medicine)

	FY98	FY99	FY00	FY01	FY02
SCH	11,880	12,279	12,245	13,480	13,252
Percent	2.0%	2.0%	2.0%	2.1%	2.0%
2005 Goal	2.3%	2.3%	2.3%	2.3%	2.3%



6 Level of academic challenge - National Survey on Student Engagement (NSSE).
(based on 100 point scale)

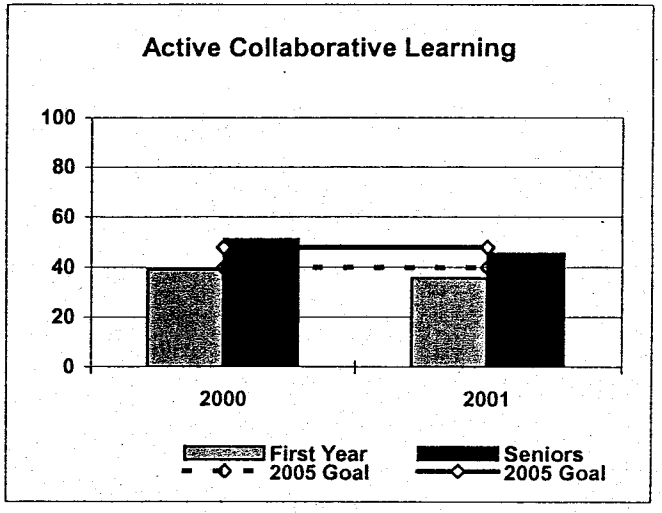
	2000	2001
First Year	46.9	49.7
2005 Goal	54.0	54.0
Seniors	48.6	50.5
2005 Goal	56.0	56.0



BOR #	MGT #	ISU#	Performance Indicator

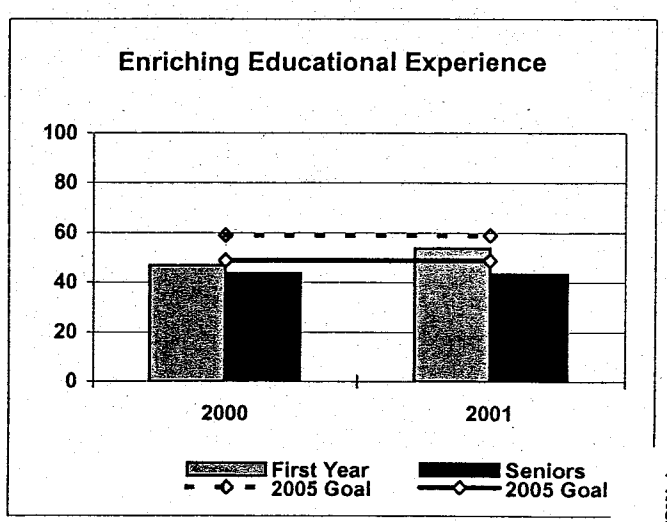
7 Active collaborative learning - NSSE.
(based on 100 point scale)

	2000	2001
First Year	39.2	35.8
2005 Goal	40.0	40.0
Seniors	51.2	45.5
2005 Goal	48.0	48.0



8 Enriching educational experience - NSSE.
(based on 100 point scale)

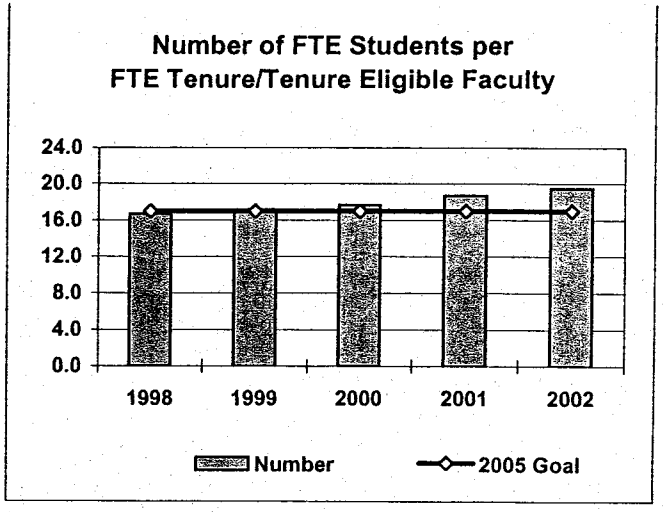
	2000	2001
First Year	47.0	53.8
2005 Goal	59.0	59.0
Seniors	43.9	43.6
2005 Goal	49.0	49.0



9 Number of FTE students per FTE tenured/tenure-eligible faculty member.

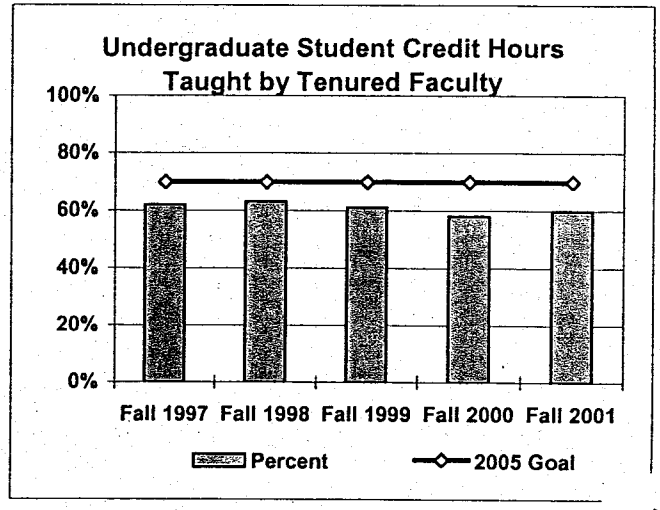
BOR # MGT # | ISU# Performance Indicator

	1998	1999	2000	2001	2002
Number	16.7	17.2	17.7	18.7	19.5
2005 Goal	17.0	17.0	17.0	17.0	17.0



10 Percent of undergraduate student credit hours taught by tenured or tenure eligible faculty.

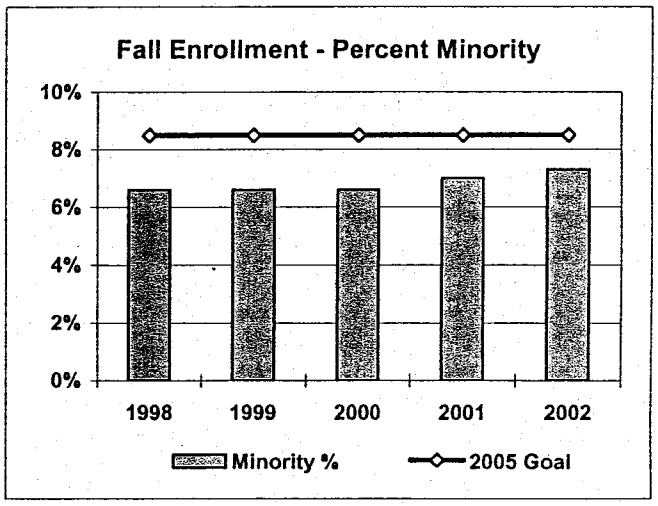
	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Fall 2001
Percent	62.1%	63.2%	61.2%	58.1%	60.1%
2005 Goal	70.0%	70.0%	70.0%	70.0%	70.0%



BOR #	MGT #	ISU#	Performance Indicator

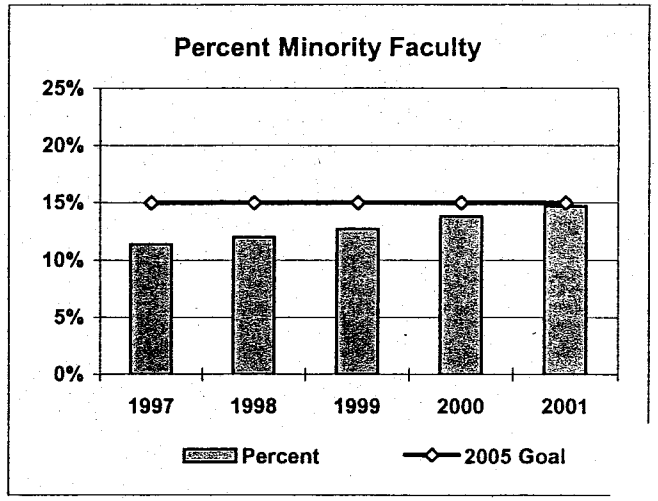
3.1.2.3 41 **11 Percent of students who are part of an ethnic minority group.**

	1998	1999	2000	2001	2002
Minority FTE	1,687	1,730	1,781	1,943	2,039
Minority %	6.6%	6.6%	6.6%	7.0%	7.3%
2005 Goal	8.5%	8.5%	8.5%	8.5%	8.5%



3.1.2.3 41 **12 Percent of tenured and tenure eligible faculty who are part of an ethnic minority group.**

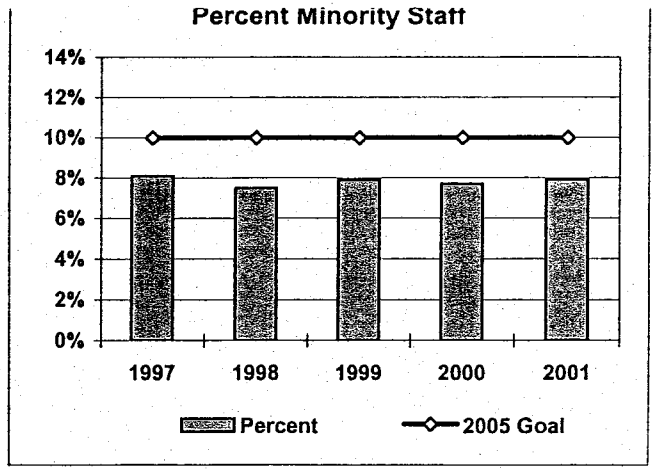
	1997	1998	1999	2000	2001
Number	162	172	181	196	205
Percent	11.4%	12.0%	12.7%	13.8%	14.7%
2005 Goal	15.0%	15.0%	15.0%	15.0%	15.0%



3.1.2.3 41 **13 Percent of staff members who are part of an ethnic minority group.**

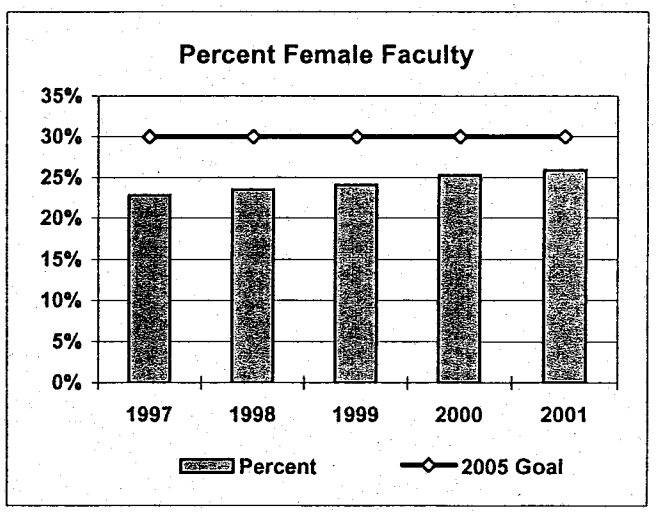
BOR # MGT # ISU# Performance Indicator

	1997	1998	1999	2000	2001
Number	172	163	178	176	184
Percent	8.1%	7.5%	7.9%	7.7%	7.9%
2005 Goal	10.0%	10.0%	10.0%	10.0%	10.0%



14 Percent of tenured and tenure eligible faculty who are female.

	1997	1998	1999	2000	2001
Number	325	338	343	361	361
Percent	22.8%	23.5%	24.1%	25.3%	25.9%
2005 Goal	30.0%	30.0%	30.0%	30.0%	30.0%



BOR #	MGT #	ISU#	Performance Indicator

15 Number of academic programs ranked in the top 25 by national disciplinary surveys.

	FY02
Number	
2005 Goal	to be determined

In process: not to be reported for FY02

16 Number of faculty in national academies (National Academy of Sciences, National Academy of Engineering, Institute of Medicine, American Academy of Arts and Sciences).

	FY02
Number	8
2005 Goal	to be determined

17 Number of faculty members who are fellows of national and international

BOR #	MGT #	ISU#	Performance Indicator

scientific/disciplinary associations.
Number in parentheses is the number of national or international societies.

	FY02
Number	185 (254)
2005 Goal	to be determined

18 Number of faculty: (a) journal editors, (b) on editorial or advisory boards of national/international professional journals, and (c) holding offices in national/international professional associations, and/or serving on national academy committees*.
Number in parentheses is the number of professional journals and editorial/advisory boards

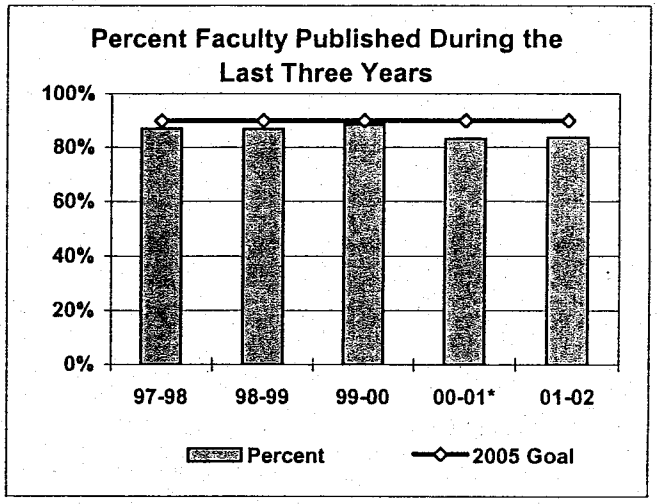
	FY02
a. Journal Editors	50 (60)
b. On Editorial/Adv Boards	284 (478)
c. Office holders	In process: not to be reported for FY02
2005 Goal	to be determined

BOR #	MGT #	ISU#	Performance Indicator

1.1.4.1. 17 **19 Percent of tenured/tenure-eligible faculty with at least one scholarly work published, exhibited, or performed in the last three years.**
(based on calendar year)

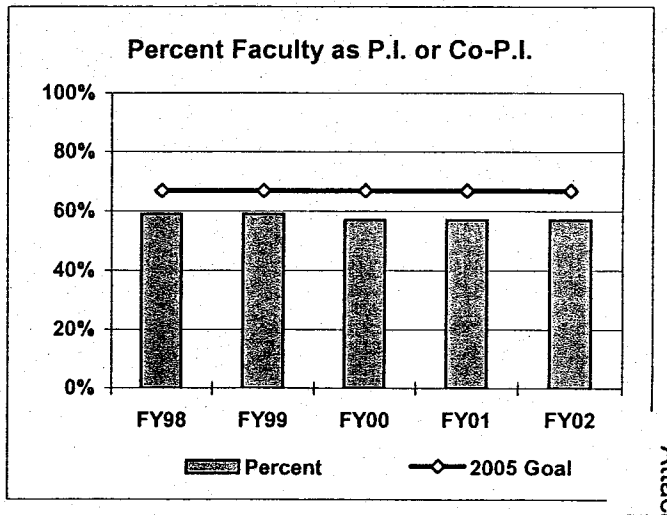
	97-98	98-99	99-00	00-01*	01-02
Percent	87.0%	86.8%	88.4%	83.2%	83.7%
2005 Goal	90.0%	90.0%	90.0%	90.0%	90.0%

*Beginning 2000-01 new methodology was used to calculate this figure

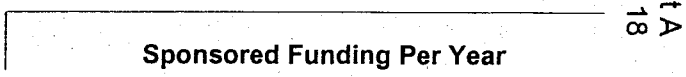


1.1.4.1 and 1.1.4.2 20 **20 Percent of tenured/tenure-eligible faculty who are principal or co-principal investigators for projects receiving external sponsored funding**

	FY98	FY99	FY00	FY01	FY02
Percent	59%	59%	57%	57%	57%
2005 Goal	67%	67%	67%	67%	67%

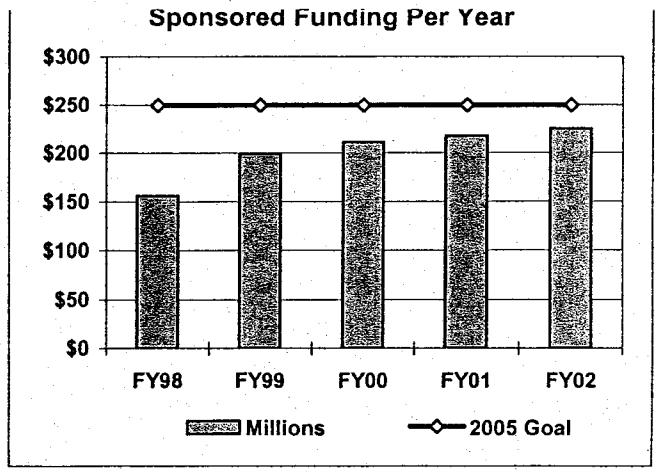


1.1.4.2 18 **21 Total annual external sponsored funding.**



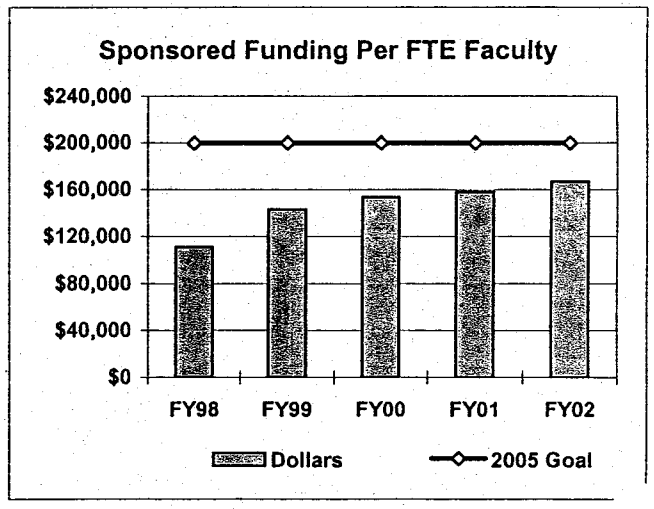
BOR #	MGT #	ISU#	Performance Indicator

	FY98	FY99	FY00	FY01	FY02
Millions	$156.2	$199.2	$211.2	$217.7	$225.4
2005 Goal	$250.0	$250.0	$250.0	$250.0	$250.0



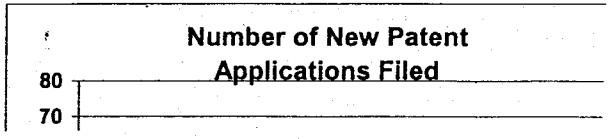
1.1.4.2 21 **22 External sponsored funding per FTE faculty.**

	FY98	FY99	FY00	FY01	FY02
Dollars	$111,100	$143,000	$153,500	$158,097	$166,767
2005 Goal	$200,000	$200,000	$200,000	$200,000	$200,000



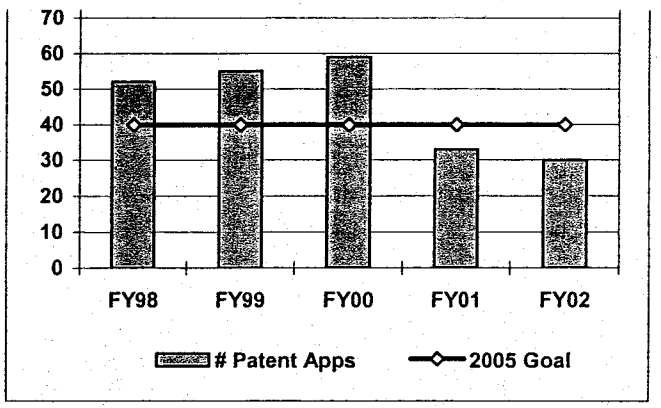
23 New patent applications filed.

	FY98	FY99	FY00	FY01	FY02



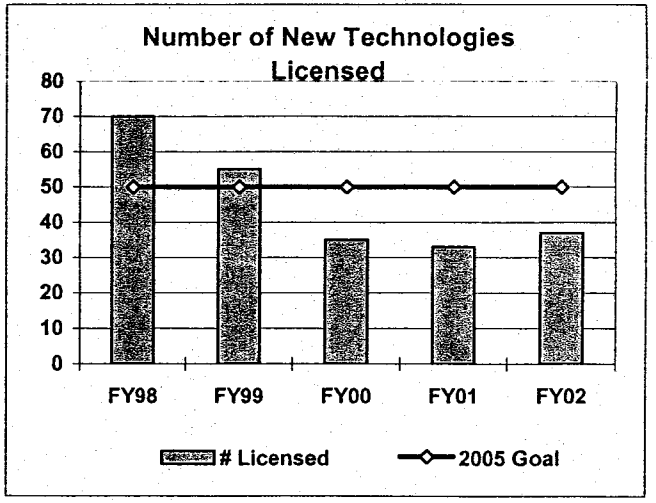
BOR #	MGT #	ISU#	Performance Indicator

# Patent Apps	52	55	59	33	30
2005 Goal	40	40	40	40	40



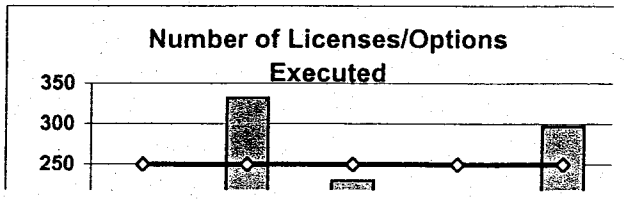
1.1.4.1 23 **24 Number of new technologies licensed/optioned annually.**

	FY98	FY99	FY00	FY01	FY02
# Licensed	70	55	35	33	37
2005 Goal	50	50	50	50	50

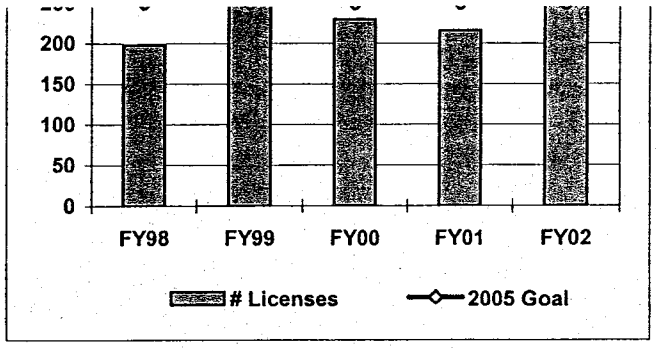


25 Number of licenses and options executed.

	FY98	FY99	FY00	FY01	FY02
# Licenses	198	332	230	216	297
2005 Goal	250	250	250	250	250



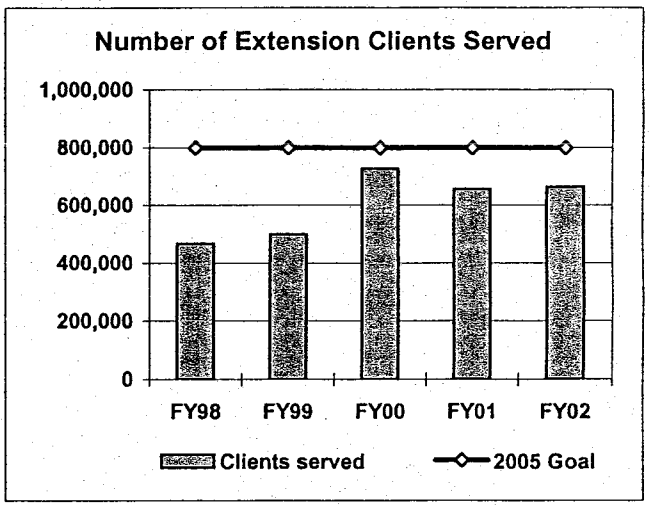
BOR #	MGT #	ISU#	Performance Indicator



1.1.4.3 29

26 Number of extension clients served

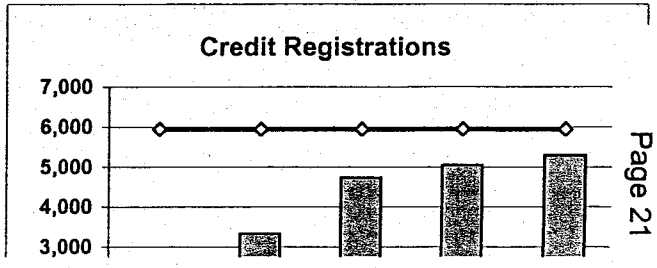
	FY98	FY99	FY00	FY01	FY02
Clients served	468,043	499,537	727,370	657,316	665,354
2005 Goal	800,000	800,000	800,000	800,000	800,000



27 Distance and continuing education: credit course registrations.

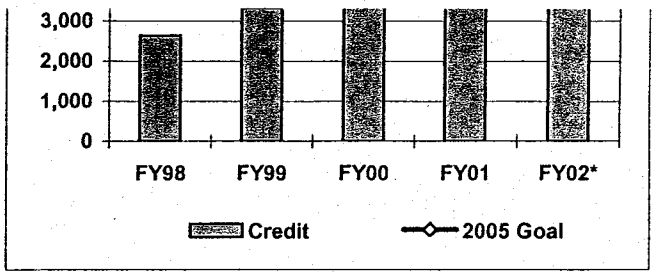
	FY98	FY99	FY00	FY01	FY02*
Credit	2,652	3,333	4,734	5,050	5,298
2005 Goal	5,950	5,950	5,950	5,950	5,950

*this does not include an additional 9,369 enrollments in evening



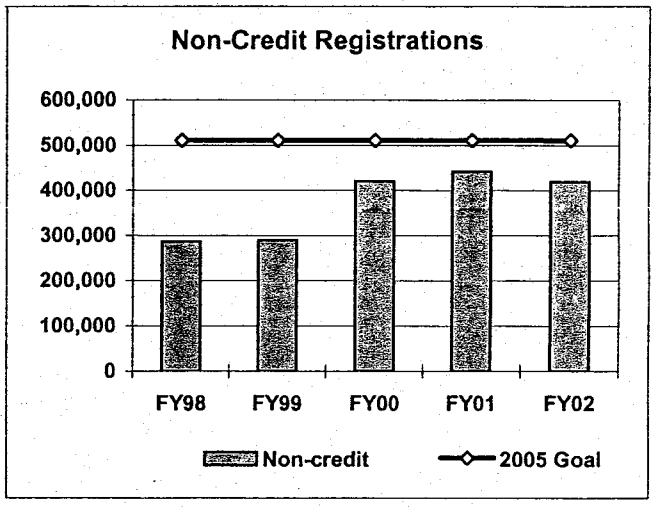
BOR #	MGT #	ISU#	Performance Indicator

and weekend courses



28 Distance and continuing education: non credit course registrations.

	FY98	FY99	FY00	FY01	FY02
Non-credit	286,482	289,729	420,380	442,121	419,378
2005 Goal	512,000	512,000	512,000	512,000	512,000

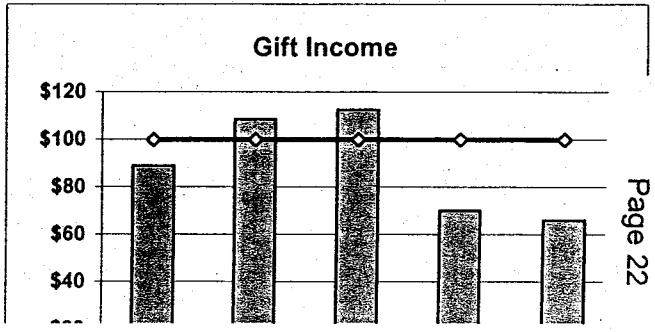


1.2.1.4 33

29 Private gift income.

In millions

	FY98	FY99	FY00	FY01	FY02
Gift Income	$89.0	$108.6	$112.5	$70.1	$66.0
2005 Goal	$100.0	$100.0	$100.0	$100.0	$100.0



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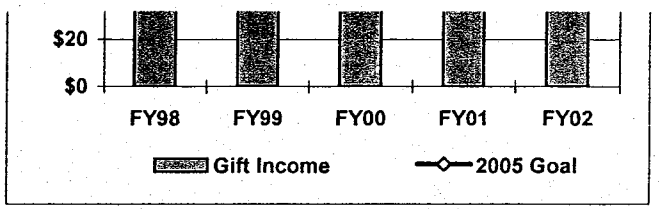
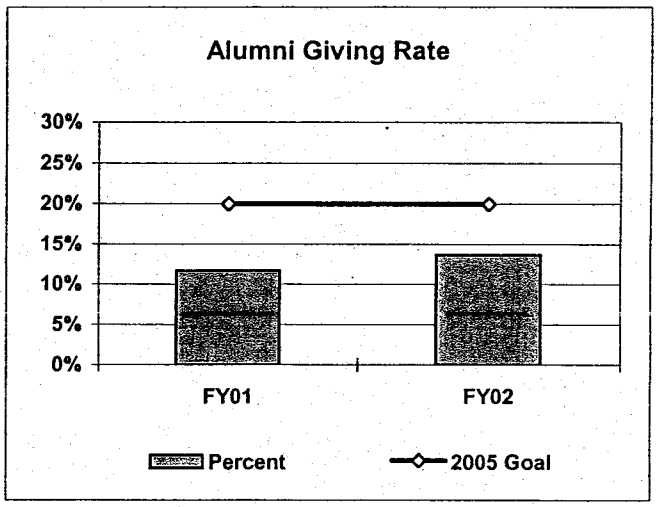
BOR #	MGT #	ISU#	Performance Indicator



30 Alumni giving rate.

	FY01	FY02
Percent	11.7%	13.7%
2005 Goal	20%	20%



BOR #	MGT #	ISU#	Performance Indicator

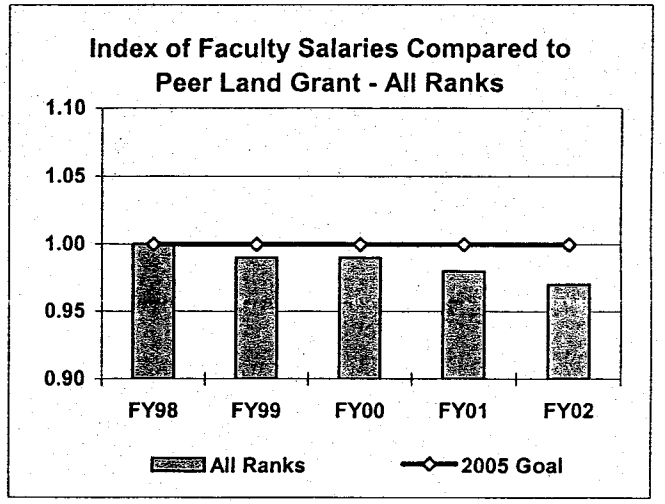
31 Average faculty salary by rank (based on 9-month)

No goal established

	97-98	98-99	99-00	00-01	01-02
Professor	$77,021	$79,406	$83,180	$85,702	$88,196
Assoc. Prof.	$56,981	$59,425	$62,131	$63,442	$65,771
Assist. Prof.	$46,416	$47,877	$50,744	$53,293	$54,973

Index of Average ISU Faculty Salaries Compared to Peer Land Grant Universities

	FY98	FY99	FY00	FY01	FY02
Professor	1.00	0.99	0.98	0.97	0.96
Assoc. Prof.	1.01	1.00	1.00	0.98	0.98
Assist. Prof.	0.97	0.97	0.99	0.98	0.97
All Ranks	1.00	0.99	0.99	0.98	0.97
2005 Goal	1.00	1.00	1.00	1.00	1.00



Introduction

"Pursuing Excellence as Iowa's Engaged Land-Grant University" is the focus of Iowa State University's 2000-2005 strategic plan. Iowa State is committed to enhancing ***Learning*** through exceptional learner-centered teaching, services, and enrichment opportunities; promoting ***Discovery*** and innovation characterized by preeminent scholarship, including increasingly interdisciplinary and collaborative activities; substantial ***Engagement*** with key constituents through synergistic sharing and partnership of knowledge and expertise to address needs of communities and society; and the ***integration*** of these three goals in campus initiatives. By pursuing and achieving excellence, Iowa State is making progress toward its aspiration of becoming the best university in the nation in fulfilling its land-grant mission.

Iowa State's strategic plan for 2000-2005 also reflects expectations outlined in the Board of Regents', State of Iowa strategic plan, and its four key result areas of quality, access, diversity, and accountability. Progress made in fiscal year 2002 (FY 2002), the second year of Iowa State's third, five-year strategic plan, is described in the following report including significant changes in the university's budget, performance measures, and selected highlights for each of the three goals.

State Support for Iowa State University

With strong support from Iowa's state government, from the Board of Regents, State of Iowa, and from the university's many constituents, Iowa State has made significant and regular progress toward the aspiration of becoming the best university in the nation in fulfilling its land-grant mission. However, major financial problems for the State of Iowa resulted in significant reductions in the university's state appropriation that slowed progress in FY 2002.

The State of Iowa reduced Iowa State University's appropriation by $32.1 million in FY 2002 at the same time that the university enrolled a record number of students - 27,823 students in fall 2001, 978 more than in the previous fall. FY 2002 budget reductions included a $15.8 million appropriation reduction at the year's onset and two mid year deappropriations of $11.4 million and $4.9 million.

New tuition revenue was not sufficient to offset unprecedented reductions in the state's support for higher education. Because of this, the university was forced to reduce the budgets of units throughout the university and found it necessary to:

- Eliminate 200 FTE General Fund positions:
  - 70 faculty positions,
  - 63 P&S positions,
  - 37 Merit staff positions,
  - 30 Graduate assistant positions.
- Close the office of Vice President for External Affairs.
- Eliminate Associate Deans in Education and Veterinary Medicine.

- Combine the positions of Associate Dean of Students with Director of Minority Student Affairs.
- Reorganize the biological sciences and, as a result, restructure curricula and the administration of several departments.
- Eliminate 4 degree programs:
  Organizational learning and human resource development (MS, PhD),
  Community health education (BS),
  Engineering science (BS),
  Engineering applications (BS).
- Merge departments for administrative savings:
  Landscape architecture with community and regional planning,
  Animal ecology with forestry.
- Reduce funds for building repairs and maintenance even further despite over $60 million in deferred maintenance.
- Reduce funds for faculty travel to professional conferences for presenting research findings.
- Cut funds for professional development for faculty and staff.
- Reduce research and other activities that foster economic development in Iowa.

Significant consequences of the budget reductions included:

- Larger classes. Between Fall 1996 and Fall 2001, the number of student credit hours taught in classes of 50 to 99 has increased by 43% and the number of student credit hours taught in classes of 100 or more students has increased by 37%, resulting in less personal attention for students.
- A ratio of FTE students to FTE tenured/tenure eligible faculty that continues to increase and is expected to reach an all time high of 19.5:1. Professors now have less time to devote to each student.
- Reduced ability to respond to student needs in a timely manner because of staff reductions in student affairs, administrative offices, and non-academic areas.
- Increased tuition.
- A one-year student persistence rate that is beginning to decline somewhat from a high of 85.1% for students entering in fall 1999 to 83.4% for student entering in fall 2001 likely resulting from loss of faculty and staff positions and increasing costs.
- Reduction in the university's ability to attract and retain faculty due to declining faculty salaries and reduced levels of financial support for instruction, research, and outreach.
- Increased fees to University Extension clients.

While the university community has worked hard to continue improving program quality in the midst of unprecedented budget cuts, these efforts cannot be sustained without rebuilding revenues. Despite these challenges, Iowa State's faculty, staff, and students achieved excellence in many important ways.

Goal 1. Learning

Iowa State University is committed to enhancing *Learning* through exceptional learner-centered teaching, services, and enrichment opportunities.

Measures

Enrollment. Iowa State's enrollment set a new record of 27,823 in fall 2001 indicating strong demand for its offerings. The number and percent of non-resident U.S. citizens who enrolled also set a new record of 5,227 (18.8%). The total number of international students enrolled increased to 2,572 although this group constitutes a slightly smaller percent (9.2%) of the total student body each year.

Diversity. A record number of minority students enrolled in fall 2001 (2,039 students, 7.3% of total enrollment). Tenured and tenure/eligible faculty who are part of an ethnic minority group grew to 205 (14.7%) while the number of female tenured/tenure eligible faculty remained stable at 361 (25.9%). The number of staff members who are part of an ethnic minority group grew some to 184 (7.9%).

Graduation rate. Iowa State's six-year graduation rate reached a record high of 65.3% in FY'02. The six-year graduation rate for minority students decreased from a high of 51.3% two years ago, although the percent of those who graduated is still 10 percentage points higher than five years ago. The number of Iowa State graduates employed or continuing their education shortly after graduation remains high at 93.7% in FY'02.

Learning communities. Participation in learning communities grew to an all time high of 2,103 in fall 2001. The one-year persistence rate of students in a learning community consistently averages 89.8%, nearly 10 percentage points higher than for students not in a learning community. The two-year and three-year persistence rates show an even larger differential of approximately 12%. Learning community participants also report statistically significant higher number of hours studying and connecting with advisors and faculty members, more time in community service and leadership activities, and higher levels of academic success and satisfaction with their educational experience than students who didn't participate in learning communities. U.S. News and World Report recently ranked Iowa State University as having one of the top five learning community programs in the nation.

Top programs. Several academic programs were recognized by national surveys or professional publications as being in the top 25 in the nation: Agriculture & Biosystems Engineering, Agriculture Education & Studies, Analytical Chemistry graduate program, Animal Science, Architecture, Civil & Construction Engineering, Educational Leadership & Policy Studies, Food Science & Human Nutrition, Interior Design, Sociology, and Statistics.

National Survey of Student Engagement (NSSE). NSSE measures student engagement activities related to learning and personal development. Fall 2001 survey results show some improvement over fall 2000 with increases in the "level of academic challenge" and the

"enriching educational experience" indices. However, there was a decrease in "active collaborative learning" possibly due to the increase in class sizes.

Highlights

Science Bound. Six students who participated in the ISU based Science Bound Program graduated from Iowa State University in FY 2002. Science Bound is designed to increase the involvement of minority students enrolled in Des Monies schools in math and science. Science Bound graduates earned degrees with specializations in genetics, veterinary medicine, management information systems, animal science, computer engineering, biology/Spanish, and biochemistry. Two are pursuing graduate school. With this success, leaders have begun discussions to expand the program to Marshalltown schools.

ISU Students Win NASA Competition. A fiber-fortified pizza crust developed by a group of food science and human nutrition students won first place in the national NASA Food Technology Commercial Space Center's product development competition. EZ Crust is made from okara, a high-fiber, high-protein by-product of soymilk and tofu production. The product is a creative and versatile use of a food item that is usually viewed as waste, and has applications for new foods on earth as well as in space. Competing teams designed foods or processing systems that could meet the criteria for missions to the moon and planetary outposts. Those criteria called for a product that could be made from crops grown in space, prepared easily, and eaten without producing many crumbs, and that was safe, nutritious to eat, and good tasting. Food scientists from NASA and commercial food companies evaluated the students' products.

ISU Students Win International Textile and Apparel Association Design Awards. The digital design work of two students from the College of Family and Consumer Sciences won awards at the International Textile and Apparel Association in Kansas City. Undergraduate Ashley Drahn's *Butterfly* won the Paris American Academy Award for Excellence in Design. Drahn received a scholarship, including shared housing, for a month-long intensive fashion course at the American Academy. Graduate student Jihyun Kim took first place in the graduate design category for her *Korean Traditional Bridal Gown: Hwal-Ot.* Drahn and Kim designed their garments as part of Jean Parsons' and J.R. Campbell's experimental digital textile and apparel class.

ISU Student One of Nine Student Composers to Win Broadcast Music Incorporated (BMI) Competition. Jonathan Saggau combined his strong interest in physics with his love of music in an award winning musical composition, *Now I am Become Death, Destroyer of Worlds.* This composition for orchestra was written by Saggau while an ISU undergraduate and earned him one of nine Student Composer Awards in the 49th Annual BMI competition this past year. The BMI competition recognizes superior creative talent and awards winners with scholarship grants for their musical education. The title of Saggau's award-winning work was based on a quote from Robert Oppenheimer, one of the architects of the atomic bomb. "Oppenheimer was torn between building this destructive weapon and working on a physics problem," Saggau

said. "This piece reflects some of Oppenheimer's 'should I or shouldn't I' continue to work on this project." Saggau depicts several aspects of the Manhattan Project in his composition from the moments the idea formed in Oppenheimer's mind to the first test and the ultimate use of the weapon on the Japanese cities of Hiroshima and Nagasaki. Saggau is currently working on a Master of Music degree in composition at Boston's New England Conservatory of Music.

Laptop lease program puts powerful wireless laptop computers into the hands of College of Design students providing access to both state-of-the-art portable computing and affordable access to expensive graphics software. This program, recently approved by Board of Regents, State of Iowa, allows full integration of this technology in an instructional environment where course materials and assignments are being transformed and where the power of the computer is being harnessed in a much more effective way advancing the quality of student learning and work.

TechCo – Technology Collaborative for Simultaneous Renewal in Teacher Education – allows pre-service teachers to complete a technology infused program from basic liberal arts courses to student teaching preparing them to assume leadership roles in integrating technology into K-12 classrooms. TechCo, funded by the United States Department of Education, also provides on-going support for university faculty and K-12 teachers as well as one-on-one mentoring for faculty and teachers who are integrating innovative uses of technology into their teaching. TechCo demonstrates appropriate models for integrating technology with K-12 instruction.

Math 150 (Discrete Mathematics for Business and Social Sciences) is being redesigned by faculty from the College of Business and the Department of Mathematics with the help of a grant from the PEW Grant Program in Course Redesign. Math 150 is the largest enrollment course on campus, serving as the entry level to the mathematics curriculum and as a foundation course for many other disciplines including business and social sciences majors. An interdisciplinary team is replacing the traditional lecture/recitation format with a self-paced, web-based course supplemented with significant on-line help and face-to-face encounters between instructional personnel and students.

Support for Learning and Discovery. The Iowa State University Foundation secured private gifts consistent with the University's fundraising priorities and managed those funds for its benefit. FY 2002 gift income totaled $66 million including progress on the "Investing in People" campaign begun in October 2001, a two-year effort to raise $50 million in new endowments for student scholarships and faculty positions. FY 2002 progress included:

- Gifts totaling nearly $2.5 million to create new endowments that will provide support in perpetuity for exceptional faculty members.
- Scholarship support of ~$8 million provided to ISU students through outright gifts and endowment earnings from the ISU Foundation.
- Gifts totaling approximately $1.6 million for endowed graduate fellowships.

Goal 2. Discovery

Iowa State University is committed to promoting *Discovery* and innovation characterized by preeminent scholarship, including increasingly interdisciplinary and collaborative activities.

Measures

University ranking. Iowa State University is classified by the Carnegie Foundation for the Advancement of Teaching as a Doctoral/Research University – Extensive. Iowa State is also a member of the prestigious Association of American Universities.

Sponsored funding and scholarship. Sponsored funding increased 50% over the last five years and in FY 2002 reached an all time high of $225.4 million, $166,767 per FTE faculty. Eighty four percent of faculty published at least one scholarly work during the last three years and 57% were principal or co-principal investigators for sponsored funding awards.

Applied science. Iowa State University continues to rank among the nation's leading universities in intellectual property activity by the Association of University Technology Managers. Iowa State ranked 23rd in the number of patents earned, 30th in invention disclosures received, 3rd in licenses and options yielding income, and 2nd in licenses and options executed in FY 2002. Iowa State received another R&D 100 Award in FY 2002 bringing the total of these awards received since 1984 by Iowa State University faculty to 24, placing it second in the nation in what is described as the "Academy Award of Applied Science."

Highlights

National security. Iowa State launched several new initiatives in partnership with state and federal agencies to improve national security including a program to train Iowa National guard personnel using the Virtual Reality Applications Center; centers for food safety and security, infectious disease, and public health; and programs in information security and forensics.

The College of Engineering is leading an interdisciplinary research and graduate education program in **Information Assurance.** One of only six programs nationwide, Iowa State's Information Systems Security Laboratory is a National Security Agency Center of Excellence and used by students to research and practice defensive electronic warfare, honing their skills for real-world encounters.

The **Midwest Forensics Resource Center (MFRC)** is a partnership of 8 crime laboratories, 4 federal agencies, the Ames Laboratory, and IPRT. This initiative grew out of forensics R&D projects that caught the attention of regional and state groups, which concluded that the region's critical, overlapping forensics demands should be led by an ISU-based center. By regionalizing, the partnership can more efficiently meet training, research, casework, and educational needs.

The **Center for Food Safety and Food Security** brings together diverse research, education and outreach components of food safety/security into one center for the purposes of efficient teamwork that is well positioned among government, industry, and

producers. The Center is bringing together research expertise from units across the university to coordinating and integrating their research activities towards high priority state and national issues. The center is also providing research-based, unbiased information on food safety and quality needed by consumers, educators, and students. The goal of the Food Safety Project is to develop web-based educational materials that give the public the tools they need to minimize their risk of food borne illness. Project successes include:

- More than 800,000 page views in 2001
- More than 4 million hits from more than 120 countries
- More than 84,000 scores recorded for the Web-based food safety lessons
- More than 2,192 teachers downloaded the on-line teacher's lesson plan to facilitate the use of the Web-based food safety lessons in their classrooms
- Municipalities, such as the City of Toronto, use lessons on Web site to educate employees.
- Awards from U.S. News Online, *US News and World Reports*, Tufts Nutrition Navigator, many others. Recommended as one of the top seven of Food Safety Sites by *Restaurant Hospitality*.

Biorenewable resources. Iowa State is rapidly becoming one of the nation's leaders in developing biorenewable resources.

Twelve **Engineering** faculty from five departments are investigating ways to convert renewable resources such as plants into bio-products and bio-energy. Specific examples of their work include plastics made from soybeans, building materials made from corn stalks, and fuels made from switchgrass. Bio-based product research and expenditures at Iowa State have topped $3.3 million. In addition, more than $1 million has been expended on curriculum and program development, including NSF funds to add four experimental modules to the current set of biotechnology experiments for undergraduate and graduate chemical engineering students.

ISU's **Biorenewable Resources Consortium (BRC)** is a partnership directed by the Ames Laboratory with the Iowa Agriculture and Home Economics Experiment Station and the Plant Sciences Institute. The BRC assembles and coordinates cutting-edge, multidisciplinary research teams charged to find new uses for agricultural products, pursuing technologies leading to new chemical products and materials, alternate energy sources, and new crops.

Faculty members at the **Center for Crop Utilization Research** keep uncovering new ways to use corn and soybeans. Scientists are working with a company to develop candles and other wax products from soybean oil, which could replace paraffin, a petroleum-based product. Faculty members are also working to find the molecular mechanisms in the corn plant that produce starch. New discoveries could allow producers to increase the value of their crops and the utility of corn for consumers. ISU's degradable plastics program developed a highway lane marker that was field tested by the Iowa Department of

Transportation. The lane markers are an environmentally friendly, disposable alternative that eliminates the labor-intensive need to remove fixed markers before plowing snow.

Human Health Research. National Institute of Health funded research projects conducted by faculty in the Department of Health and Human Performance focus on a variety of health and well being concerns shared by elderly people. The influenza project is testing the effects of exercise and diet on the immune system in older adults. The Parkinson's disease study is trying to gain new understanding of how the disease limits motor skills such as grasping and reaching and what can be done to improve these functions. The large multidisciplinary grant to establish a center to study human diet is monumental for Iowa State. The researchers involved will examine topics such as the effects of supplements, plant compounds, and extracts on human health. They will also measure the effectiveness of these on cholesterol and estrogen development and the differences that they make on humans' well being throughout their life spans.

Nondestructive Evaluation. The Center for Nondestructive Evaluation continues its efforts to develop and apply techniques for the detection of flaws or defects in materials and structures. This IPRT center is led by engineering faculty and has recently obtained an additional $2 million from NASA for a "smart materials" initiative. Smart materials can sense their environment and adapt to changing circumstances thereby improving the reliability of systems in which they are used. The center provides a collaborative environment for applied and basic research for faculty, graduate students, and undergraduates as well as being engaged in various collaborative and professional development activities with industry and government agencies. The center is also developing a distance education program in nondestructive evaluation. The highly interdisciplinary activities of this field are central to the safety of many major structural systems found in the transportation, energy, chemical and other industries, including aircraft, nuclear power plants and refineries. However, the great breadth and specialized nature of the field has precluded the development of a solid academic base. The university, through CNDE and working closely with the IPRT and the College of Engineering, is arguably the national if not international leader in this area of technology. In response to training needs voiced by industry, a set of distance education courses are being assembled with the goal of establishing a Master's Degree program and offering a series of specialized short courses. The initial course, an Overview of NDE, will be presented for the first time in the fall semester, offered both through the ISU distance education program and the National Technical University. These courses are offering new features in education, namely the use of tutorial simulators. These simulators are based on rigorous physics models, in our case of the inspection process, including x-ray, ultrasonic and eddy current methods. As such, they offer a unique means to present complex conceptual ideas in an intuitive manner. The same tutorial simulators are further used as tools for a student to calculate realistic results as applied to complex industrial examples. This application of robust simulators in a classroom environment is emerging in a number of areas and when coupled with industrial examples provides a new means to provide a student with technically sophisticated materials with real industrial relevance.

Goal 3. Engagement

As the nation's first land grant institution, Iowa State University is committed to *Engagement* with key constituents through synergistic sharing and partnership of knowledge and expertise to address needs of communities and society.

Measures

Iowa State University Extension connected with 665 thousand people this year, over one-fifth of Iowa's citizenry through courses, conferences, workshops, seminars, and consultations. Enrollment in distance education courses grew to 5,298 in FY 2002 with an additional 9,369 registrations in evening and weekend courses. There was a decline in the number of registrations in non-credit courses. Six new companies began operations in the ISU Research Park bringing to 120 the number of companies located in or affiliated with the park.

Highlights

Iowa Small Business Development Center (SBDC). The SBDC is the largest outreach component of the College of Business. During the past year, the SBDC helped 12,211 clients, representing all of Iowa's 99 counties, with 95,582 hours of service. The SBDC continues to offer programs such as the Iowa Business Network, the Iowa Targeted Small Business Program, and the Iowa Technology Showcase in order to link Iowa businesses with the latest in information, marketing assistance, and technology innovation. SBDC clients generated $32.1 million in incremental sales and 765 new jobs in FY 2002.

Business Analysis Laboratory. The Business Analysis Laboratory, funded primarily by 3M Corporation, continues to provide an extraordinary learning environment that combines learning, discovery, and engagement activities. Approximately 60 students per year (graduate and undergraduate) from the Colleges of Business, Education, and Engineering worked in conjunction with faculty and top 3M executives to address real business and technology-related problems in a team environment. This spring, Lockheed Corporation joined in the Business Analysis Laboratory.

Deere Institute. John Deere & Company is funding a one million dollar educational program called the Deere Institute through Iowa State Extension to help Deere employees better understand their company's role in agriculture. This institute is offered to Deere employees at the Waterloo plant where ~4,000 employees will be trained. The institute is now being prepared for delivery to Deere plants nation wide. Deere Institute is one of fourteen that comprise the ISU Academy organized by Iowa State Extension to offer training for certificate and/or to meet other professional requirements.

Iowa Manufacturing Extension Partnership (IMEP) developed the Lean Program to introduce Iowa manufacturers to new technologies and management methods that can improve competitiveness. The Lean Program provides trained delivery professionals, instructional materials, publicity, and evaluation. One hundred companies have paid $1.5 million for 348 lean training events over the last 18 months. IMEP has merged its Lean Program with Iowa

Business Council's AMRCC Lean initiative. The objective has been to broaden the reach and exchange of Lean practices within Iowa's manufacturing community. This AMRCC/IMEP Lean Team has already changed Iowa manufacturers productivity and competitiveness. The Program has also stimulated a new level of cooperation between IMEP and the Iowa Business Council.

Athletics. Iowa State University also reached out to citizens of Iowa and the nation is through its many athletic events including the football team's appearance at the Independence Bowl, by hosting the NCAA women's basketball regional tournament, and through outstanding athletes like Cael Sanderson who ended his collegiate career in FY 2002 as the only wrestler in NCAA history to be undefeated (150-0) and win four national titles, leading Iowa State to a second-place national finish. Iowa State's student-athletes, coaches, and staff also participated in over 40 community and state service projects this past year, including Special Olympics, the Governor's Learn to Read program in elementary schools, visits to area schools and hospitals, and hosting of special events for 4-H and University Extension offices. Cyclone student-athletes for the fifth straight year participated in Read Across America via the state's fiber optics system, reading to more than 200 elementary schools statewide.

Looking to the Future

Iowans have depended on Iowa State University since its beginnings. Over the years tens of thousands of Iowans have earned degrees from Iowa State and millions have benefited from the University's commitment to "Science with Practice." It is clear that Iowans will continue to look to Iowa State University to provide access and opportunity in higher education, improve the quality of life in our communities, and assist with economic development.

Iowa State University is committed to academic excellence, to fulfilling the goals of its strategic plan, and to becoming the best university in the nation in fulfilling its land-grant mission. To achieve the overarching goal of excellence, the university will focus on four priorities:

- Increase the number of academic programs that are counted among the very best in the field,
- Ensure that we provide a top quality education to our students,
- Increase our connectivity to the people we serve – the citizens of Iowa, and
- Enhance efforts to foster diversity and ensure an inviting and welcoming climate that supports success for all members of the university community.

Realization of this commitment to excellence is dependant on strong support from the State of Iowa and continued partnership with the friends of Iowa State University. It is also dependent on careful stewardship of the existing resources. Last year, the university initiated a process to identify several high potential academic initiatives to pursue along with a continued commitment to the Plant Sciences Institute. Of thirty-one pre-proposals, six were recommended for funding. In spite of formidable budget challenges, the university reallocated enough seed money to advance these important initiatives because of the potential each has to contribute to society. All six initiatives build on areas of strength bringing greater coordination and focus.

The **Food Safety and Food Security Initiative** will bring greater coordination to a number of existing, strong Iowa State programs. It will serve farmers, producers, processors, and consumers focusing on areas such as food production, food service and retail sales, international food security, public policy and communication, food-borne infectious diseases, and risk analysis.

The **Combinatorial Discovery Initiative** will expand a new analytical method to discover and test new materials for a wide range of uses, particularly high-performance nanomaterials, biomaterials, and catalysts.

The **Human Computer Interaction Initiative** will use the university's Virtual Reality Applications Center to stay at the forefront of technological trends in computers and computing in order to develop more useful interfaces for the people who use them.

The **Bioeconomy Initiative** will advance the use of plants and agricultural products to produce chemicals, fuels, materials, and energy. It will be closely aligned with the Ames Laboratory and the Plant Science Institute.

The **Information Infrastructure Initiative** will strengthen information technology research and education at Iowa State by consolidating several existing activities and creating multidisciplinary teams in areas such as agricultural engineering, smart transportation systems, air traffic control, genetic engineering, bioinformatics, and financial systems.

The **Center for Integrated Animal Genomics** will focus on identifying and understanding the function and control of animal genes, developing new genetic technologies for improving the health of agriculturally important animals, and understanding the genetics of disease resistance to promote safer animal-based food products.